

AMENDMENTS TO THE CLAIMS

1-18. (Cancelled)

19. (Previously Presented) A synthetic antimicrobial peptide comprising one of the amino acid sequences listed in the Sequence Listing, or its functional analog derived from substitution, cyclization, replacement of L-amino acid by D-amino acid, deletion or addition of one or more amino acids.

20. (Previously Presented) The synthetic antimicrobial peptide of claim 19, wherein the peptide comprises the following core structure:

(A1-A2-A3-A4)(A1'-A2'-A3'-A4')

or

(A1-A2-A3-A4)(A1'-A2'-A3'-A4')(A1"-A2"-A3"-A4").

21. (Previously Presented) The synthetic antimicrobial peptide of claim 20, wherein A1, A1' and A1" are each selected from the group consisting of Lys and Arg.

22. (Previously Presented) The synthetic antimicrobial peptide of claim 20, wherein A2, A2' and A2" are each selected from the group consisting of Gly, Ala, Val, Leu, Ile and Phe.

23. (Previously Presented) The synthetic antimicrobial peptide of claim 20, wherein A3, A3' and A3" are each selected from the group consisting of Gly, Ala, Val, Leu, Ile and Phe.

24. (Previously Presented) The synthetic antimicrobial peptide of claim 20, wherein A4, A4' and A4" are each selected from the group consisting of Lys and Arg.

25. (Previously Presented) The synthetic antimicrobial peptide of claim 20, wherein the N-terminal end of the core structure (A1-A2-A3-A4) is linked with a sequence having 11 amino acids.

26. (Previously Presented) The synthetic antimicrobial peptide of claim 25, wherein each of the amino acids 1, 3, 6 and 7 of the sequence is selected from the group consisting of Lys and Arg.

27. (Previously Presented) The synthetic antimicrobial peptide of claim 25, wherein the amino acid 2 of the sequence is selected from the group consisting of Trp and Phe.

28. (Previously Presented) The synthetic antimicrobial peptide of claim 25, wherein each of the amino acids 4, 5, 8, 9, 10 and 11 of the sequence is selected from the group consisting of Leu, Ile, Ala, Val and Gly.

29. (Previously Presented) A method for producing the synthetic antimicrobial peptide of claim 19 by solid-phase chemical synthesis.

30. (Currently Amended) A method for producing the synthetic antimicrobial peptide of claim 19, comprising the steps of

cloning a gene ~~the genes~~ encoding the synthetic antimicrobial peptide[[s]] into a vector,
transforming the vector into a host cell, and
expressing the synthetic antimicrobial peptide[[s]].

31. (Previously Presented) The method of claim 30, wherein the vector is selected from the group consisting of plasmid and virus.

32. (Previously Presented) The method of claim 30, wherein the host cell is a prokaryotic cell.

33. (Previously Presented) The method of claim 32, wherein the prokaryotic cell is selected from the group consisting of Escherichia coli and Bacillus subtilis.

34. (Previously Presented) The method of claim 30, wherein the host cell is a eukaryotic cell.

35. (Previously Presented) The method of claim 34, wherein the eukaryotic cell is selected from the group consisting of yeast, plant, insect and mammal cells.

36. (Currently Amended) A method Use of the synthetic antimicrobial peptide of claim 19 in the preparation of a drug for treating a subject having an the infectious disease[[s]] induced by bacteria, fungi and/or viruses, comprising administering to the subject the synthetic antimicrobial peptide of claim 19 in an amount effective for treating the infectious disease.

37. (Currently Amended) A method Use of the synthetic antimicrobial peptide of claim 19 in the preparation of an antitumor drug for treating a subject having a tumor, comprising administering to the subject the synthetic antimicrobial peptide of claim 19 in an amount effective for treating the tumor.